Patented Feb. 5, 1924. 1,482,416

UNITED STATES PATENT OFFICE.

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PRESERVATIVE COMPOSITION.

No Drawing. Application filed April 17, 1923. Serial No. 632,772.

To all whom it may concern:

Be it known that I, WALTER O. SNELLING, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain Improvements in Preservative Compositions, of which the following is a specification.

My invention relates to improvements in preservative compositions and more particularly relates to improved antiseptic and fungicidal compositions useful in the treatment of fabrics, rope and like materials, for the purpose of protecting such materials from deterioration through the growth of bacteria and molds.

The use of metallic salts of the naphthenic acids, and particularly the copper salt, as fungicidal agents in paints is already well known, but I have discovered that for many purposes improved results may be obtained by employing copper naphthenate dissolved in a non-drying oil, as a preservative composition or protecting agent for cloth, rope, wood, or other materials subject to rotting and decay as the result of the growth of molds and other micro-organisms.

In the preferred form of my invention I employ copper naphthenate as my active antiseptic and fungicidal agent, and I dissolve the copper naphthenate in dichlorbenzene, by thoroughly incorporating the two materials at a temperature slightly in excess of the melting point of the dichlorbenzene. I then incorporate the mixture or solution so obtained in a non-drying oil such as lubricating oil, or in a non-drying organic vehicle such as tar, petroleum, sludge oil or other like material.

Instead of employing dichlorbenzene as the primary solvent of my metallic naphthenate, I may employ many other organic solvents, or I may directly dissolve my metallic naphthenate in a non-drying oil, by thoroughly incorporating the metallic naphthenate with the oily vehicle, preferably with gentle warming and trituration.

Among the large number of non-drying organic materials which I may use as solvents for metallic naphthenates in the practice of my invention, I prefer the use of dichlorbenzene, chlorinated naphthalene, ethylene trichloride, molten naphthalene, or equivalent materials. Among the vehicles which I may use as solvents and carriers of my metallic naphthenates, I prefer to use petrolatum, tar, mineral oils, rosin oils, or other inexpensive liquid or semi-liquid hydrocarbon.

As an example of my invention, I will describe a process which I may employ in the protection of tent cloth, rope cables, fishing nets and other like objects composed of vegetable fibers subject to deterioration from mold. I first prepare naphthenic acids from crude petroleum in the usual way, although synthetic naphthenic acids may be used with equal success. I next prepare the copper salt of my naphthenic acids, preferably by neutralization of the acids with a fixed alkali following by treatment with a water soluble copper salt such as copper sulfate for example by methods well known in the art.

Having prepared copper napthenate as above described or in any other suitable way I next heat together equal parts by weight of copper naphthenate and dichlorbenzene, using a temperature only slightly in excess of the melting point of the dichlorbenzene, rubbing or triturating the two materials together continuously until thorough incorporation is secured. The product so obtained may be incorporated with gentle warming in petroleum, tar, mineral oil, or any other suitable vehicle, and may then be used to impregnate wood, cloth, rope or other like material that is to be protected against the action of micro-organisms such as molds.

The essential feature of my invention is the employment of a metallic salt of a naphthenic acid dissolved or suspended in a non-drying liquid vehicle as a protective agent against bacterial and mold growth. Although I have referred specifically to copper naphthenate as my preferred agent, my invention is not limited to the use of this compound, as I find that other metallic naphthenates may be used although usually with less satisfactory results than when the copper naphthenate is employed, owing to their possessing weaker bactericidal and fungicidal properties.

Although I have illustrated my invention by a specific embodiment, it should be noted that my invention is not limited to the specific example given, and many equivalents may be used, with substantially equivalent

results, and accordingly no limitations should be imposed except such as are indicated in the appended claims.

I claim:

1. A preservative composition comprising a metallic salt of naphthenic acid dissolved in a non-drying liquid menstruum.

2. A preservative composition comprising copper naphthenate dissolved in a non-drying liquid menstruum.

3. A preservative composition comprising copper naphthenate dissolved in a liquid non-drying mineral hydrocarbon.

4. A preservative composition comprising copper naphthenate dissolved in a non-drying oil.

5. The process of protecting vegetable fibers from decay which comprises impregnating such fibers with a metallic naphthenate dissolved in a non-drying oil.

6. The process of protecting vegetable fibers from decay which comprises impregnating such fibers with a composition comprising a metallic naphthenate, a chlorinated hydrocarbon and a non-drying oil.

7. The process of protecting vegetable fibers from decay which comprises impregnating such fibers with copper naphthenate and dichlorbenzene dissolved in a liquid non-drying vehicle.

In testimony whereof, I have hereunto subscribed my name this 14th day of April, 1923.

WALTER O. SNELLING.